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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,351

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Luca Matteucci

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BAKER BOTTS L.L.P.

PATENT DEPARTMENT

98 SAN JACINTO BLVD., SUITE 1500

AUSTIN, TX 78701-4039

EXAMINER

JONAITIS, JUSTIN M

ART UNIT

PAPER NUMBER

3752

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,351	<b>Applicant(s)</b> MATTEUCCI ET AL.	
	<b>Examiner</b> JUSTIN JONAITIS	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/16/2007</u> . | 6) <input type="checkbox"/> Other: ____.  |

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-3, 5-7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. PG-Pub 2001/0007338 to Popp.

In reclaims 1 and 5, Popp discloses a fluid injector comprising:

- an **Actuator Unit (Piston (44))**
- A **Cartridge (nose piece (38))** which comprises a **recess (outlet orifice (70) and channel through injector)**, which on one of its open ends forms an **injection nozzle (closure member (74))** and takes in a needle,
- Wherein the needle comprises a **first and second part (valve (46) and valve guide (60) respectively)** with the first part being inserted into the recess and closing or opening the injection nozzle depending on the position of the first part, wherein the second part is **coupled to the actuator unit on one of its free ends (coupled together by cartridge (34))**, and being coupled to the first part via a **coupling unit (valve body (48) & threads)** which is arranged in **positive connection to the first part (In positive connection at valve seat (68) when in closed position)**, and is joined to the second part (by screw thread).

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In re claims 2 and 6, Popp discloses the invention as described above including **the coupling unit forms a spring rest (Spring rests on lower narrow wall of Valve Body (48))** on which a **return spring (Spring (66))** rests, that urges the needle in a position in which the injection nozzle is closed.

In re claims 3 and 7, Popp discloses the invention as described above including a **receptance (notch where keeper (78) fits into valve (46))**, which is formed in the first part and fixes a **keeper (keeper (78))** in axial direction relative to the needle, and a **coupling body (valve body (48))** which has a **recess (space in between walls)**, through which the first part protrudes and which takes in the keeper and fixes it in the radial direction relative to the needle and with the **coupling body being joined to the second part (by threaded connection)**.

In re claim 9, Popp discloses a fluid injector comprising:

- An **actuator unit (Piston (44))**
- A **cartridge (nose piece (38))** which comprises a **recess (outlet orifice (70) and channel through injector)**, which on one of it's ends forms an **injection nozzle (closure member (74))**
- A Needle comprising a **first and second part (valve (46) and valve guide (60) respectively)** with the first part being inserted into the recess and closing or opening the injection nozzle depending on the position of the first part, wherein the second part is coupled to the **actuator unit (coupled together by cartridge (34))** on one of its free ends and being coupled to the first part via a **coupling unit (valve body (48) & threads)**, which is arranged **in positive connection to the first part (when valve is closed)** and is **joined to the second part (by screw threads)**, where in the

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- coupling unit forms a **spring rest (Spring rests on lower narrow portion of valve body (48))**, on which a **return spring (Spring (66))** rests, that urges the needle in a position in which the injection nozzle is closed, and
- **A receptance (notch where keeper (78) fits into valve (46))**, which is formed in the first part and fixes a **keeper (Keeper (78))** in axial direction relative to the needle, and a **coupling body (valve body (48))**, which has a **recess (space between walls)** through which the first part protrudes and which takes in the keeper and fixes it in the radial direction relative to the needle and with the **coupling body being joined to the second part (by threaded connection)**.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).\

6. Claims 4, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. PG-Pub 2001/0007338 to Popp in view of U.S. PG-Pub 2002/0043575 to Sekine et al.

Popp discloses the invention as described above but discloses the coupling unit being joined to the second part by a threaded connection as opposed to welding. Sekine et al. teaches that it is known to use welding to connect components together in a fuel injection apparatus. It would have been obvious to one having ordinary skill in the art at the time the invention was made to weld the coupling unit to the second part as taught by Sekine et al. since Sekine et al. teaches that welding is a suitable way of joining two components together in a fuel injection apparatus for a permanent joining.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent #5,178,362 to Vogt et al discloses a fluid injector with similar structure. U.S. Patent #5,241,935 to Beck et al. discloses a fluid injector with similar structure and components. U.S. PG-Pub 2001/0002681 to Willke et al. discloses a fluid injection valve with similar structure and components. U.S. PG-Pub 2004/0046138 to Stein et al. discloses a fluid injection with similar structure. U.S. Patent #6,561,436 to Boecking discloses a fluid injection valve with similar structure and components.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN JONAITIS whose telephone number is (571)270-5150. The examiner can normally be reached on Monday - Thurs 6:30am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JUSTIN JONAITIS/  
Examiner, Art Unit 3752  
/Len Tran/  
Supervisory Patent Examiner, Art Unit 3752